

CLAIMS

1. A non-storage type broadcasting system (100) for providing one or more services (S) composed of a content (C) in real-time for viewing by a user and providing a user interface (B) unique to each (Sm) of the services (S), the system comprising:

transmission means (110) for sending out a control content (Cb), which implements the user interface (B), as a part or whole of the content (C); and

10 reception means (130) for receiving the sent control content (Cb) and activating the received control content (Cb) to execute the user interface (B),

wherein the user interface (B) is transmitted/received as a content.

15

2. The non-storage type broadcasting system (100) according to claim 1, wherein the control content (Cb) is a browser (B) for the content (C).

20

3. The non-storage type broadcasting system (100) according to claim 1,

wherein the transmission means (130) includes:

content sending means (112) for sending out a content (C) containing the control content (Cbc); and

25

service attribute information sending means (111) for

sending out service attribute information (Isp) indicating details of the services, and

wherein the reception means (130) includes control content identification means (S504) for identifying the control content

5 (Cb) from among received contents (C) based on the received contents (C, Hc) and the service attribute information (Isp).

4. The non-storage type broadcasting system (100) according to claim 3,

10 wherein the content sending means (112) includes content header addition means (112) for adding, to the content (C), a content header (Hc) which defines details of the content, and

wherein the reception means (130) identifies the control content (Cb) from among the received contents (C) based on content 15 headers (Hc) of the received contents (C, Hc).

5. The non-storage type broadcasting system (700) according to claim 3,

wherein the transmission means (710) further includes 20 electronic signature means (711) for applying an electronic signature to the control content (Cbc),

wherein the service attribute information sending means (111) sends out a public key (KP) of the electronic signature (Sg) in the service attribute information (Isp),

25 wherein the reception means (730) further includes signature

authentication means (138; S1002) for authenticating the electronic signature with the public key (KP) contained in received service attribute information (Isp), and

wherein the control content (Cb) is identified by  
5 authenticating the electronic signature.

6. The non-storage type broadcasting system (700) according to claim 5, wherein the authentication by the electronic signature (Sg) is performed using a key independent of each service.

10

7. The non-storage type broadcasting system (1500) according to claim 3,

wherein the content sending means (112) further includes content ID space management means for sending out information (CSD)  
15 which defines a partial space of an ID space of the content (C), and

wherein the reception means (130) further includes identification means (S1801) for identifying the control content (Cb) based on whether a content ID falls within the partial space.

20

8. A control content transmission method for use in a non-storage type broadcasting system (100) for providing one or more services (S) composed of a content (C) in real-time for viewing by a user, the method providing a user interface (B) unique to  
25 each (Sm) of the services (S), the method comprising:

a step of sending out a control content (Cb), which implements the user interface (B), as a part or whole of the content (C); and

5 a step (S501-S505) of receiving the sent control content (Cb) and activating the received control content (Cb) to execute the user interface (B).

9. The control content transmission method according to  
claim 8, wherein the control content (Cb) is a browser (B) for  
10 the content (C).

10. The control content transmission method according to  
claim 8,

wherein the transmission step further includes:

15 a content sending step of sending out a content (C)  
containing the control content (Cbc); and

a service attribute information sending step of  
sending out service attribute information (Isp) indicating details  
of the services, and

20 wherein the reception step (S501-S505) includes a control  
content step (S504) of identifying the control content (Cb) from  
among received contents (C) based on the received contents (C,  
Hc) and the service attribute information (Isp).

25 11. The control content transmission method according to

claim 10,

wherein the content sending step includes a content header addition step of adding, to the content (C), a content header (Hc) which defines details of the content, and

5 wherein the reception step further includes a step of identifying the control content (Cb) from among the received contents (C) based on content headers (Hc) of the received contents (C, Hc).

10 12. The control content transmission method (700) according to claim 10,

wherein the transmission step further includes an electronic signature step (711) of applying an electronic signature to the control content (Cbc),

15 wherein the service attribute information sending step further includes a service attribute information sending step of sending out a public key (KP) of the electronic signature (Sg) in the service attribute information (Isp), and

wherein the reception step further includes:

20 a signature authentication step (S1002) of authenticating the electronic signature with the public key (KP) contained in received service attribute information (Isp); and a step (S1003) of identifying the control content (Cb) by authenticating the electronic signature.

13. The control content transmission method according to  
claim 12, wherein the authentication by the electronic signature  
(Sg) is performed using a key independent of each service.

5       14. The control content transmission method according to  
claim 10,

          wherein the content sending step further includes a content  
ID space management step of sending out information (CSD) which  
defines a partial space of an ID space of the content (C), and

10      wherein the reception step further includes an  
identification step (S1801) of identifying the control content  
(Cb) based on whether a content ID falls within the partial space.

15      15. A reception device (130) for use in a non-storage type  
broadcasting system (100) for providing one or more services (S)  
composed of a content (C) in real-time for viewing by a user and  
providing a user interface (B) unique to each (Sm) of the services  
(S), the reception device receiving a control content (Cb) which  
implements the user interface (B), the control content being  
20     transmitted as a part or whole of the content (C) and having added  
thereto service attribute information (Isp) indicating details  
of the services, the reception device comprising:

          reception means (131) for receiving contents (C) transmitted  
from the transmitter (110);

25      extraction means (132) for demodulating the received

contents (C) and extracting the contents (C, Hc) and the service attribute information (Isp); and

control content identification means (S504) for identifying the control content (Cb) from among the received contents (C) based on the extracted contents (C, Hc) and the service attribute information (Isp).

16. The reception device (130) according to claim 14,

wherein in the non-storage type broadcasting system (100),

10 the content (C) is transmitted after being further added with a content header (Hc) which defines details of the content,

wherein the extraction means (132) further extracts the content header (Hc) from the received contents (C), and

wherein the control content identification means (S504)

15 identifies the control content (Cb) from among the received contents (C) based on the extracted content header (Hc).

17. The reception device (730) according to claim 15,

wherein in the non-storage type broadcasting system (700),

20 the content (C) the control content (Cbc) is signed with an electronic signature, and a public key (KP) of the electronic signature (Sg) is sent out in the service attribute information (Isp),

wherein the reception device (730) further includes

25 signature authentication means (138; S1002) for authenticating

the electronic signature with the public key (KP) contained in received service attribute information (Isp), and

wherein the control content identification means (S504) identifies the control content (Cb) by authenticating the  
5 electronic signature.

18. The reception device (730) according to claim 17, wherein the authentication by the electronic signature (Sg) is performed using a key independent of each service.

10

19. A non-storage type broadcasting system (1500) according to claim 15,

wherein in the non-storage type broadcasting system (1500), the content (C) is added with information (CSD) which defines a  
15 partial space of an ID space of the content (C), and

wherein the identification means (S1801) further identifies the control content (Cb) based on whether a content ID falls within the partial space.